

ERK1 mouse Monoclonal Antibody(5E9)

YM3674 Catalog No:

Reactivity: Human;Rat;Mouse

IF;WB;IHC **Applications:**

Target: ERK 1

Fields: >>EGFR tyrosine kinase inhibitor resistance;>>Endocrine

> resistance:>>Platinum drug resistance:>>MAPK signaling pathway:>>ErbB signaling pathway;>>Ras signaling pathway;>>Rap1 signaling pathway;>>cGMP-PKG signaling pathway;>>cAMP signaling pathway;>>Chemokine signaling pathway;>>HIF-1 signaling pathway;>>FoxO signaling pathway;>>Sphingolipid

signaling pathway;>>Phospholipase D signaling pathway;>>Oocyte

meiosis;>>Autophagy - animal;>>mTOR signaling pathway;>>PI3K-Akt signaling

pathway;>>Apoptosis;>>Cellular senescence;>>Adrenergic signaling in

cardiomyocytes;>>Vascular smooth muscle contraction;>>TGF-beta signaling pathway;>>Axon guidance;>>VEGF signaling pathway;>>Apelin signaling

pathway:>>Osteoclast differentiation:>>Focal adhesion:>>Adherens

junction;>>Gap junction;>>Signaling pathways regulating pluripotency of stem cells;>>Platelet activation;>>Neutrophil extracellular trap formation;>>Toll-like receptor signaling pathway:>>NOD-like receptor signaling pathway:>>C-type

lectin recep

Gene Name: MAPK3

Protein Name: MAPK3

Human Gene Id: 5594

Human Swiss Prot P27361

No:

Q63844 **Mouse Swiss Prot**

No:

Rat Swiss Prot No: P21708

Recombinant Protein of ERK1 of MAPK3 Immunogen:

Specificity: ERK1 protein detects endogenous levels of MAPK3

1/3



Formulation: Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Source: Monoclonal, Mouse

Dilution: WB 1:500-2000 IF 1:50-200 IHC 1:100-200

Purification: The antibody was affinity-purified from mouse ascites by affinity-

chromatography using specific immunogen.

Concentration: 1 mg/ml

Storage Stability: -15°C to -25°C/1 year(Do not lower than -25°C)

Observed Band: 44kD

Cell Pathway: MAPK_ERK_Growth;MAPK_G_Protein;ErbB_HER;Chemokine;Oocyte

meiosis;mTOR;Vascular smooth muscle contraction;Dorso-ventral axis

formation; TGF-beta; Axon guidance; VEGF; Focal

adhesion; Adherens Junction; Gap i

Background: The protein encoded by this gene is a member of the MAP kinase family. MAP

kinases, also known as extracellular signal-regulated kinases (ERKs), act in a signaling cascade that regulates various cellular processes such as proliferation, differentiation, and cell cycle progression in response to a variety of extracellular signals. This kinase is activated by upstream kinases, resulting in its translocation to the nucleus where it phosphorylates nuclear targets. Alternatively spliced

transcript variants encoding different protein isoforms have been described.

[provided by RefSeq, Jul 2008],

Function: catalytic activity:ATP + a protein = ADP + a

phosphoprotein.,cofactor:Magnesium.,domain:The TXY motif contains the threonine and tyrosine residues whose phosphorylation activates the MAP kinases.,enzyme regulation:Activated by tyrosine phosphorylation in response to insulin and NGF.,function:Involved in both the initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells by phosphorylating a number of transcription factors such as ELK-1. Phosphorylates EIF4EBP1; required for initiation of translation. Phosphorylates microtubule-associated protein 2 (MAP2). Phosphorylates SPZ1 (By similarity). Phosphorylates heat shock factor protein 4 (HSF4).,PTM:Dually phosphorylated on Thr-202 and Tyr-204, which activates the enzyme.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily.

protein kinas

Subcellular Location:

 $\ensuremath{\mathsf{Cytoplasm}}$. Nucleus. Membrane, caveola . Cell junction, focal adhesion .

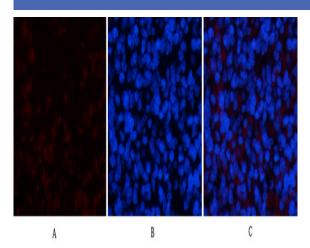
Autophosphorylation at Thr-207 promotes nuclear localization

(PubMed:19060905). PEA15-binding redirects the biological outcome of MAPK3 kinase-signaling by sequestering MAPK3 into the cytoplasm (By similarity).

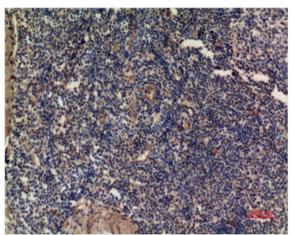
Expression:

Epithelium, Eye, Hepatoma, Human cervix, Lymph,

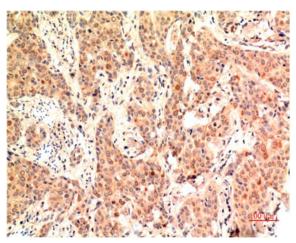
Products Images



Immunofluorescence analysis of rat-spleen tissue. 1,ERK1 Mouse Monoclonal Antibody(5E9)(red) was diluted at 1:200(4°C,overnight). 2, Cy3 labled Secondary antibody was diluted at 1:300(room temperature, 50min).3, Picture B: DAPI(blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



Immunohistochemical analysis of paraffin-embedded Human Tonsil Tissue using ERK1 Mouse mAb diluted at 1:200.



Immunohistochemical analysis of paraffin-embedded Human Breast Carcinoma Tissue using ERK1 Mouse mAb diluted at 1:200.